ABSTRACT OF THE DISCLOSURE

An encoder suppresses effectively the high-frequency components of data to be transmitted by decreasing the changing points of serial data, thereby suppressing EMI. A changing-point counter counts changing points of n-bit data (n: a positive integer) to generate a counting result, where values of adjoining bits change at each of the changing points. The changing-point counter outputting a discrimination bit which is true when the counting result exceeds a predetermined value. A code converter converts the n-bit data in such a way that bits of the n-bit data located at predetermined positions are inverted when the discrimination bit is true. A parallel-to-serial converter converts (n + 1)-bit data to a (n + 1)-bit serial code, the (n + 1)-bit data being generated by adding the discrimination bit to an output of the code converter.